Acute Viral Hepatitis

A systemic infection predominantly affecting the liver.

Causes

- Hepatotropic (hepatitis A, B, C, D, and E)
- Occasionally-Cytomegalovirus (CMV), herpes simplex, coxsackie virus, and adeno virus
- Hepatitis A and E are self-limiting, infection with hepatitis C and to a lesser extent hepatitis B usually becomes chronic

Symptoms and Signs

Some manifestations of acute hepatitis are virus-specific, but in general, acute infection tends to develop in predictable phases:

Incubation period: The virus multiplies and spreads without causing symptoms.

Prodromal (pre-icteric) phase: Nonspecific symptoms include profound anorexia, malaise, nausea and vomiting, a newly developed distaste for, and often fever or right upper quadrant abdominal pain. Urticaria and arthralgias occasionally occur especially in HBV infection.

Icteric phase: After 3 to 10 days, the urine darkens, followed by jaundice.

Systemic symptoms often regress, and patients feel better despite worsening jaundice.

Tender enlarged (soft and smooth). Mild splenomegaly occurs in 15 to 20% of patients. Jaundice usually peaks within 1 to 2 wk.

Recovery phase: During this 2- to 4-wk period, jaundice fades. Appetite usually returns after the first week of symptoms. Acute viral hepatitis usually resolves spontaneously4 to 8 wk after symptom onset.

Anicteric hepatitis (hepatitis without jaundice) occurs more often than icteric hepatitis in patients with HCV infection and in children with HAV infection. it typically manifests as a minor flu-like illness.

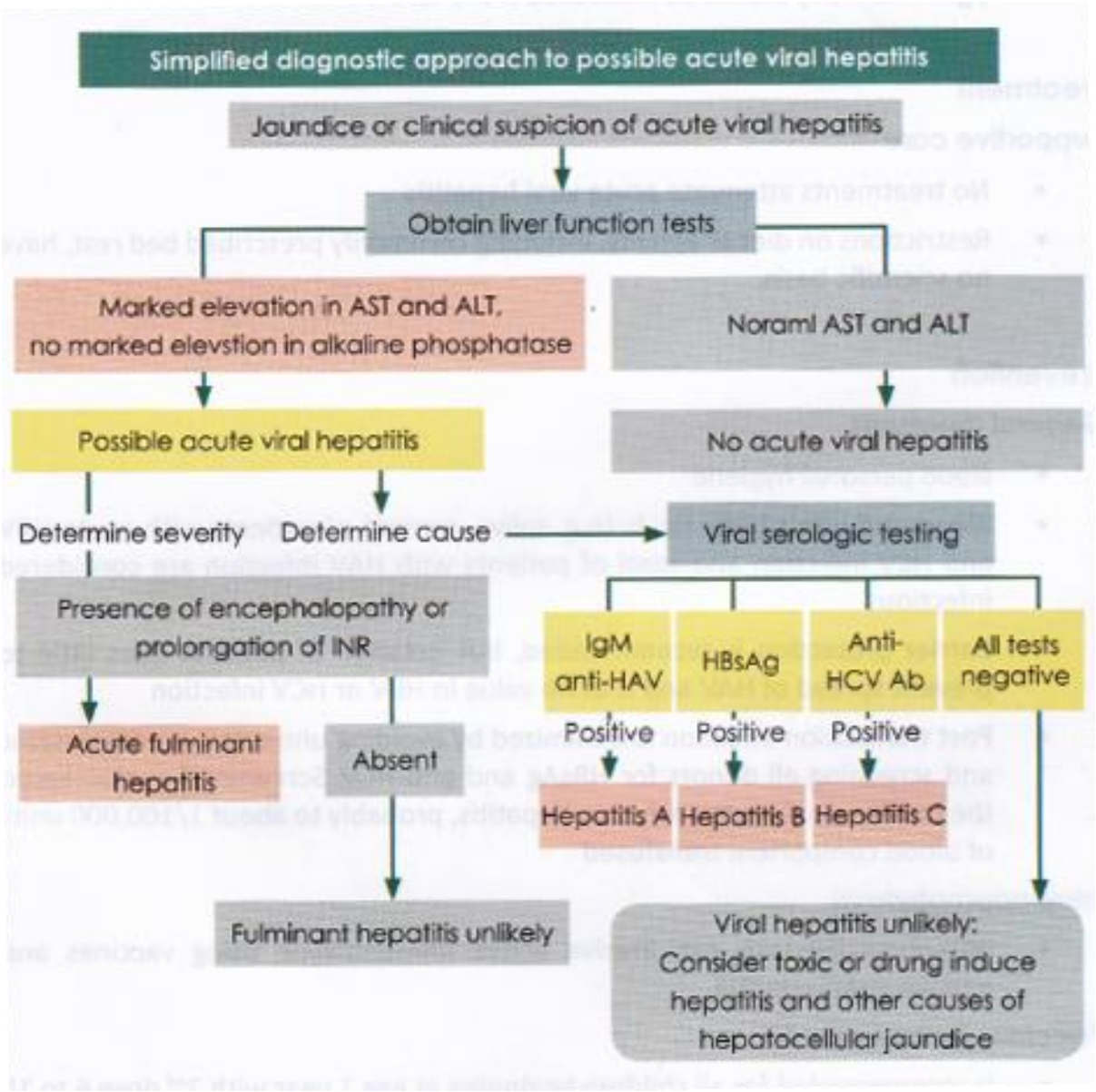
Recrudescent hepatitis occurs in a few patients and is characterized by recurrent manifestations during the recovery phase.

Manifestations of cholestasis may develop during the icteric phase (called cholestatic hepatitis) but usually resolve. When they persist, they cause prolonged jaundice,

elevated alkaline phosphatase, and pruritus, despite general regression of inflammation.

Diagnosis

- Liver function tests (AST and AIT elevated out of proportion to alkaline phosphatase, usually with hyperbilirubinemia)
- Viral serologic testing
- PT/INR measurement
- AST and ALT (typically ≥400 IU/L) ALT is typically higher than AST
- Alkaline phosphatase is usually only moderately elevated; marked elevation suggests extrahepatic cholestasis and prompts imaging tests (eg. ultrasonography)



Serology

- In patients with findings suggesting acute viral hepatitis, the following studies are done to screen for hepatitis viruses A, B, and C:
- IgM antibody to HAV (IgM anti-HAV)
- Hepatitis B surface antigen (HBsAg)
- IgM antibody to hepatitis B core (IgM anti-HBc)
- Antibody to HCV (anti-HCV)

- If any are positive, further serologic testing may be necessary to differentiate acute from past or chronic infection
- If the patient has recently traveled to an endemic area, IgM antibody to HEV (IgM anti-HEV) should be measured if the test is available.

Treatment

Supportive care

- No treatments attenuate acute viral hepatitis
- Restrictions on diet or activity, including commonly prescribed bed rest, have no scientific basis.

Prevention

General measures

- Good personal hygiene
- Blood and other body fluids (e.g. saliva, semen) of patients with acute HBV and HCV infection and stool of patients with HAV infection are considered infectious
- Barrier protection is recommended, but isolation of patients does little to prevent spread of HAV and is of no value in HBV or HCV infection
- Post transfusion infection is minimized by avoiding unnecessary transfusions and screening all donors for HBsAg and anti-HCV, Screening has decrease the incidence of posttransfusion hepatitis, probably to about 1/100,000 units of blood component transfused

Immunoprophylaxis

- Immunoprophylaxis can involve active immunization using vaccines and passive immunization.

Vaccines for hepatitis A

- Is recommended for all children beginning at age 1 year with 2nd dose 6 to 18 month after the first
- Post exposure prophylasix should be given up to 2 wk after exposure

Vaccines for hepatitis B

- Both active and passive immunizations available
- Given to children in 3 doses series at age 0 month, at1 to 2 month and at 6 to18 month. (0.5 ml up to 20 year)

Table 13.4 Hepatitis A Serology

Marker	**Acute HAV Infection**	**Prior HAV Infection**
IgM anti-HAV	+	-
IgG anti-HAV	-	+

Table 13.5 Hepatitis B Serology

Marker	**Acute HBV Infection**	**Chronic HBV Infection**	**Prior HBV Infection**
HBsAg	+	+	-
Anti-HBs	-	-	+
IgM anti-HBc	+	-	-
IgG anti-HBc	-	+	+/-
HBeAg	+/-	+/-	-
Anti-HBe	-	+/-	+/-
HBV-DNA	+	+	-

+Patients have had HBV infection and recovered

‡Anti-HBs is also seen as the sole serologic marker after HBV vaccination